

B<sub>2</sub> 5. (Amended) A genomic DNA data containing medium according to claim 4, wherein said adapter has a 3'-protruding end that is labeled by attaching two to ten radio- or fluorescent-labeled bases complementary to the 3'-protruding end.

6. (Amended) A genomic DNA data containing medium, which has been obtained by means of a method of analysis according to claim 4, wherein the first restriction enzyme cuts the genomic DNA such that 3' end of the recognition site of the first restriction enzyme has a protruding sticky end.

B<sub>3</sub> 7. (Amended) A genomic DNA data containing medium according to claim 4, wherein the first restriction enzyme comprises a recognition sequence that includes at least one N, where N can be any of A, G, C, or T and the linking end of the adapter having a ligating sequence is designed to anneal to the restriction enzyme cleavage site and has a base complementary to N in the recognition sequence of the first restriction enzyme.

8. (Amended) A genomic DNA data containing medium, which has been obtained by means of a method of analysis according to claim 4, wherein the first restriction enzyme comprises BstXI, BglI, or MwoI.

9. (Amended) A genomic DNA data containing medium according to claim 8, wherein the medium comprises an electrophoresis gel.--

[ Please add claims 10 to 15.]

B<sub>4</sub> -- 10. (New) A genomic DNA data containing medium, which is obtained by a method comprising:

(a) treating genomic DNA with a first restriction enzyme that is sensitive to methylation of the genomic DNA;

(b) linking one end of an adapter to a restriction enzyme cleavage site, which is cut by the first restriction enzyme and is complementary to the end of said adapter, and labeling the other end of said adapter;

(c) treating the resulting DNA fragments with a second restriction enzyme to bring about first-dimensional fractionation;

(d) treating the fractionated DNA fragments of step (c) with a third restriction enzyme to bring about second-dimensional fractionation; and

(e) comparing the resulting spots of the labeled DNA fragments with a standard spot pattern derived from DNA fragments known not to be methylated.

11. (New) A genomic DNA data containing medium according to claim 10, wherein the first restriction enzyme comprises NotI, AccIII, or BssHII..

12. (New) A genomic DNA data containing medium, which is obtained by means of a method of analysis comprising:

(a) treating genomic DNA with a first restriction enzyme to produce restriction enzyme cleavage sites having a protruding 3' end;

(b) linking one end of an adapter to a restriction enzyme cleavage site, which is cut by the first restriction enzyme and is complementary to the end of the adapter, and labeling the other open end of said adapter;

(c) treating the resulting DNA fragments with a second restriction enzyme to bring about first-dimensional fractionation;

(d) treating the fractionated DNA fragments of step (c) with a third restriction enzyme to bring about second-dimensional fractionation; and

(e) detecting the spots of the labeled DNA fragments fractionated in step (d).

13. (New) A genomic DNA data containing medium according to claim 12, further comprising:

labeling the adapter comprises attaching labeled bases to the open end of the adapter.

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cont.  
14. (New) A genomic DNA data containing medium according to claim 12, wherein the adapter is labeled by attaching two to ten labeled bases to the open end of the adapter.

15. (New) A genomic DNA data containing medium according to claim 12, wherein the adapter is labeled by attaching two to ten radio- or fluorescent-labeled bases to the open end of the adapter. --

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